

CLAIMS:

1 1. A method of authenticating a user agent to a
2 server using SIP (Session Initiation Protocol) messages,
3 the method comprising:

4 forwarding an SIP request from the user agent to
5 the server;

6 forwarding a request for authentication from the
7 server to the user agent in response to the SIP request,
8 the request for authentication including information that
9 the authentication will be performed using a UMTS
10 (Universal Mobile Telecommunications System) AKA
11 (Authentication and Key Agreement) mechanism;

12 forwarding an authentication response from the
13 user agent to the server in response to the request for
14 authentication in accordance with the UMTS AKA mechanism;
15 and

16 performing an invoked SIP procedure on the server
17 in response to the SIP request if the authentication is
18 deemed successful in view of the authentication response.

1 2. The method of claim 1, the SIP request comprising
2 one of an SIP INVITE request or an SIP REGISTER request.

1 3. The method of claim 1, the request for
2 authentication comprising one of an SIP 401 Unauthorized
3 code or an SIP 407 Proxy Authentication Required code.

1 4. The method of claim 3, the request for
2 authentication comprising UMTS AKA RAND (RANDOM challenge)
3 and AUTN (authentication token) vectors.

1 5. The method of claim 4, the RAND and AUTN factors
2 being included in an SIP WWW-Authenticate or Proxy-
3 Authenticate response header field.

1 6. The method of claim 1, the authentication
2 response comprising one of a UMTS AKA RES (response) code
3 or an AUTS (synchronization failure parameter) code or an
4 error code.

1 7. The method of claim 6, the authentication
2 response being included in an SIP Authorization or Proxy-
3 Authorization header field.

1 8. The method of claim 1, the invoked procedure
2 comprising an acknowledgement response comprising an SIP
3 200 code.

1 9. A program storage device readable by a machine,
2 tangibly embodying a program of instructions executable by
3 the machine to perform a method of authenticating a user
4 agent to a server using SIP messages, the method
5 comprising:

6 forwarding an SIP request from the user agent to
7 the server;

8 forwarding a request for authentication from the
9 server to the user agent in response to the SIP request,
10 the request for authentication including information that
11 the authentication will be performed using a UMTS
12 (Universal Mobile Telecommunications System) AKA
13 (Authentication and Key Agreement) mechanism;

14 forwarding an authentication response from the
15 user agent to the server in response to the request for
16 authentication in accordance with the UMTS AKA mechanism;
17 and

08 performing an invoked SIP procedure on the server
09 in response to the SIP request if the authentication is
10 deemed successful in view of the authentication response.

01 10. The storage device of claim 9, the SIP request
02 comprising one of an SIP INVITE request or an SIP REGISTER
03 request.

01 11. The storage device of claim 9, the request for
02 authentication comprising one of an SIP 401 Unauthorized
03 code or an SIP 407 Proxy Authentication Required code.

01 12. The storage device of claim 11, the request for
02 authentication comprising UMTS AKA RAND (RANDOM challenge)
03 and AUTN (authentication token) vectors.

1 **13.** The storage device of claim **12**, the RAND and
2 AUTN factors being included in an SIP WWW-Authenticate or
3 Proxy-Authenticate response header field.

1 **14.** The storage device of claim **9**, the authentication
2 response comprising one of a UMTS AKA RES (response) code
3 or an AUTS (synchronization failure parameter) code or an
4 error code.

1 **15.** The storage device of claim **14**, the
2 authentication response being included in an SIP
3 Authorization or Proxy-Authorization header field.

1 **16.** The storage device of claim **9**, the invoked
2 procedure comprising an acknowledgement response comprising
3 an SIP 200 code.